

Supplementary data

Table 2. Precision of CTMA of the cup using beads in the bone for the pelvic bone registration

	Precision n = 10	Registration errors			SD
		mean	minimum	maximum	
X translation, mm	0.14	0.02	-0.05	0.17	0.06
Y translation, mm	0.10	0.02	-0.07	0.10	0.04
Z translation, mm	0.16	0.01	-0.12	0.13	0.07
X rotation, °	0.31	0.03	-0.14	0.31	0.14
Y rotation, °	0.37	-0.04	-0.31	0.22	0.16
Z rotation, °	0.33	-0.03	-0.32	0.20	0.15
SD = standard deviation					

Table 3. Precision of CTMA of the cup using pelvic surface bone anatomy for the bone registration

	Precision n = 10	Registration errors			SD
		mean	minimum	maximum	
X translation, mm	0.16	0.02	-0.03	0.20	0.07
Y translation, mm	0.14	0.01	-0.05	0.09	0.06
Z translation, mm	0.10	0.00	-0.07	0.09	0.04
X rotation, °	0.25	-0.04	-0.28	0.12	0.11
Y rotation, °	0.21	-0.11	-0.23	0.10	0.09
Z rotation, °	0.31	0.00	-0.24	0.19	0.14
SD = standard deviation					

Table 4. Precision of RSA of the cup using beads

	Precision n = 9	Registration errors			SD
		mean	minimum	maximum	
X translation, mm	0.09	0.01	-0.05	0.08	0.04
X translation, mm	0.20	0.01	-0.10	0.20	0.09
X translation, mm	0.26	-0.06	-0.26	0.07	0.11
X rotation, °	1.69	-0.05	-0.89	1.60	0.75
Y rotation, °	1.56	-0.27	-1.97	0.26	0.69
Z rotation, °	0.43	0.12	-0.16	0.36	0.19
SD = standard deviation					